Claims

1 A caisson breakwater characterized in that at least one caisson (1) of said caisson breakwater comprises a vertical duct (2), a room (3), and at least one air duct (4) connecting said room (3) with the atmosphere; where: said vertical duct (2) is on the wave beaten side of said caisson (1); said vertical duct (2) extends substantially along the whole caisson (1); said vertical duct (2) is connected with the sea through an upper opening (6) beneath the sea level; said vertical duct (2) is connected with the room (3) through a lower opening (7) or through a horizontal or sloping duct (19); said room (3) extends substantially along the whole caisson (1); said room (3) is in part beneath the sea level and in part above the sea level; said air duct, or air ducts, (4) comprises at least one turbine (5).

2 The caisson breakwater according to claim 1, where the vertical duct (2) is subdivided into sections (2',2'',2''') and the room (3) is subdivided into cells (3',3'',3''') by vertical walls (14',14''), and where each of said cells (3',3'',3''') is connected with the atmosphere through at least one air duct (4',4'',4''') with a turbine (5',5'',5'''), and where the air ducts (4',4'',4''') are provided with valves (9',9'',9''') or other closing devices.

3 The caisson breakwater according to claim 1, where the vertical duct (2) is subdivided into sections (2',2'',2''',2^{IV},2^{V},2^{VI}) and the room (3) is subdivided into cells (3',3'',3''',3^{IV},3^{V},3^{VI}) by vertical walls (14', 14'',14''', 14^{IV}, 14^{V}), where the air can circulate through the cells (3',3'',3''',3^{IV},3^{V},3^{VI}) or through groups or said cells, for example through openings (15', 15'',15^{IV},15^{V}) in the walls (14', 14'',14''',14^{IV}, 14^{V}), and the air in the cells (3',3'',3''',3^{IV},3^{V},3^{VI}) is connected with the atmosphere through at least one air-duct (4',4'') being provided with turbines (5',5'') and valves (9',9'') or other closing devices.

4 The caisson breakwater according to claim 1, where the vertical duct (2) is subdivided into sections (2',2'',2''',2^{IV},2^{V},2^{VI}) and the room (3) is subdivided into cells (3',3'',3''',3^{IV},3^{V},3^{VI}) by vertical walls (14',14'',14''',14^{IV},14^{V}), with the cells (3',3'',3''',3^{IV},3^{V},3^{VI}) being connected with the atmosphere through tubes (16',16'',16''',16^{IV},16^{V},16^{VI}) which join (directly or with some interposed distribution frames) at least one air-duct (4',4'') being provided with turbines (5',5''), and where the tubes (16',16'',16''',16^{IV},16^{V},16^{VI}) are provided with valves

($9'$,$9''$,$9'''$,9^{IV},9^{V},9^{VI}) or other closing devices.

5 The caisson breakwater according to claim 2 wherein the room (3) is provided with a vertical septum (18), and where said septum (18) extends for all the width of the room (3) and extends in height from the roof (8) downwards without reaching the base of said room (3).

6 A factory of green power, characterized in that said factory consists of the caisson breakwater according to claims 1 or 2 or 3 or 4 or 5, and a number of wind mills in the protected water-sheet behind said caisson breakwater.